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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,497	12/23/2003	Shinji Ono	016907-1593	7780

22428 7590 06/28/2005

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EXAMINER	
RICHER, AARON M	

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/743,497	ONO, SHINJI	
	Examiner	Art Unit	
	Aaron M. Richer	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 23 December 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 20031223.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to because of the following informalities: The phrase "The code processing unit according to claim 4, the ratio unit..." in lines 1-2 is grammatically incorrect. It is suggested that this be changed to "The code processing unit according to claim 4, **wherein** the ratio unit..." Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Adachi (U.S. Patent 5,886,652).

4. As to claim 1, Adachi discloses a code processing circuit comprising:

a plurality of coders which encode different kinds of data, respectively (col. 1, lines 10-21; codes of different lengths are coded);

a first buffer which stores the codes outputted from the coders provided corresponding to said plurality of coders (fig. 1, element 8);

a second buffer which stores the lengths of the codes outputted from the coders provided corresponding to said plurality of coders (col. 5, lines 29-33; the threshold arithmetic calculation unit finds an average bit length for codes; storing the lengths of codes somewhere is inherent to finding an average);

a first adder which adds the code lengths stored in the second buffer provided corresponding to said plurality of coders (col. 5, lines 29-33; the threshold arithmetic calculation unit finds an average bit length for codes; adding code lengths is inherent to finding an average);

a second adder which adds all the code lengths added in the first adder (col. 5, lines 29-33; the threshold arithmetic calculation unit finds an average bit length for codes; adding code lengths is inherent to finding an average);

and an adjustment unit which adjusts an output code by the unit of 1 bit based on the codes stored in the first buffer, the code lengths stored in the second buffer and the code lengths added in the second adder (fig. 1, elements 9, 10; a threshold is set and codes are adjusted if the threshold is exceeded).

5. As to claim 2, Adachi discloses a circuit wherein the adjustment unit comprises

a code length memory which stores the unit of the output code length (fig. 1, elements 8, 9; a code length must be stored);

a code length comparator which compares the code lengths added in the second adder with the code lengths stored in the code length memory (fig. 1, element 9);

an enable signal generator which generates said plurality of different kinds of effective code signals based on the code lengths stored in the second memory and the comparison result of the code length comparator (fig. 1, element 10, a signal is sent to either break up a code of leave it intact based on the comparison result);

and an output code generator which generates output codes by the unit of 1 bit from the codes stored in the first memory and the effective code signals generated by

the enable signal generator (fig. 1, elements 9, 10; a threshold is set and codes are adjusted if the threshold is exceeded).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi in view of Kim (U.S. Publication 2003/0025709).

8. As to claim 3, Adachi does not disclose a ratio unit which calculates the ratio of the codes outputted from said plurality of kind of data, wherein the adjustment unit cuts off the codes based on the ratio, when the value of the code lengths added in the second adder is larger than the output unit stored in the code length memory. Kim, however, discloses a method of determining a ratio of bit lengths to represent a code, and cutting off bit lengths to fit this ratio (p. 1, paragraphs 0019-0021). The motivation for this is to enhance contrast in bright environments (p. 1, paragraph 0012). It would have been obvious to one skilled in the art to modify Adachi to cut off bit lengths according to a ratio in order to enhance contrast as taught by Kim.

9. As to claim 5, Kim discloses a unit wherein the ratio unit has a ratio setting unit which previously sets the ratio of each code length added in the first adder (fig. 4, elements s4, s5).

10. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi in view of Kim and further in view of Hong (U.S. Patent 5,301,032).

11. As to claim 4, neither Adachi nor Kim a unit wherein the ratio unit has a ratio calculator which calculates the ratio of each code length according to the code lengths added in the first adder and the code lengths added in the second adder. Hong, however, discloses a method of calculating a ratio of block activity to total block activity (col. 10, lines 8-20). Since block activity is a number of bits (col. 8, lines 28-59), Hong is calculating a ratio of bit length of one data block to total bit length, just as the adders in the applicant's invention are. The motivation for this is to improve compression efficiency (col. 1, lines 7-18). It would have been obvious to one skilled in the art to modify Adachi and Kim to calculate a ratio of bit lengths in order to improve compression efficiency as taught by Hong.

12. As to claim 6, Kim discloses a unit wherein the ratio unit has a ratio setting unit which previously sets the ratio of each code length added in the first adder, and a switching unit which switches and outputs one of the ratio set in the ratio setting unit and the ratio calculated by the ratio calculator (p. 3, paragraphs 0064-0071; fig. 4; the unit is set to "indoors" or "outdoors" or senses to calculate a ratio for the best contrast).

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi (U.S. Patent 5,886,652).

14. As to claim 7, Adachi does not expressly disclose a circuit wherein said different kinds of data is red data, green data and blue data. However, Adachi is generally related to displaying picture data (fig 1, elements 1, 2). Official notice has been taken of

the fact that displaying a picture with red, green, and blue data is well-known in the art (see MPEP 2144.03). It would have been obvious to one skilled in the art to modify Adachi to encode in RGB format in order to provide compatibility with a popular standard of image encoding.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M. Richer whose telephone number is (571) 272-7790. The examiner can normally be reached on weekdays from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMR
6/24/05

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